

REMARKS

Applicant submits that the present amendment is fully responsive to the Office Action dated June 21, 2006 and, thus, the application is in condition for allowance.

By this reply, claims 1-3 and 6-28 are amended. Claims 1 through 30 remain pending. Of these, amended claims 1, 7, 9 15, 17, 20, 23, 25, and 28 are independent.

In the outstanding Office Action, claims 8-19 as originally filed were objected to for being improperly numbered, and two claims were numbered “20.” This typographical error has been corrected in the present amendment. However, to facilitate the review of the present remarks, applicant will respond to the Office Action using the claim numbers as used by the Examiner. An expedited review and allowance of the application is respectfully requested.

In the outstanding Office Action, claims 1-30 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant respectfully traverses.

In the outstanding Office Action, claims 1-6 and 10-15 were rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. It is noted that there is a lack of clarity whether the logic or the processor communicates audible signals via a speaker. Applicant respectfully traverses.

Claims 1-6 and 10-15 as originally filed disclose the necessary structural connections between the speaker and the processor. Specifically, independent claims 1 and 10 disclose that the logic is applied to the processor to affect the speaker to communicate the audible signal. Additionally, the logic is defined in the specification as to “affect the operation of a processing device” (spec ¶24). However, to expedite the prosecution of the application, claims 1 and 10

have been amended to clarify the necessary structural connections between the logic, processor, and speaker. Thus, the independent claims 1 and 10 and their respective dependent claims 2-6 and 11-15 should not be allowable.

In the outstanding Office Action, claims 8-9 and 16-17 were similarly rejected under 35 U.S.C. § 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. It is noted that there is a lack of clarity whether the logic or the processor converts and applies control signals. Applicant respectfully traverses.

Claims 8-9 and 16-17 as originally filed disclose the necessary structural connections between the elements. Specifically, independent claims 8 and 16 disclose that the logic is applied to the processor to affect the speaker to communicate the audible signal. Additionally, the logic is defined in the specification as to “affect the operation of a processing device” (spec ¶24). However, to expedite the prosecution of the application, claims 8 and 16 have been amended to clarify the necessary structural connections between the logic, processor, and microphone. Thus, the independent claims 8 and 16 and their respective dependent claims 9 and 17 should not be allowable.

In the outstanding Office Action, claims 18-30 were rejected under 35 U.S.C. § 112, second paragraph, being indefinite for failing to point out the subject matter that applicant regards as the invention. Specifically, it is asserted that in independent claims 18, 20, 23, 25, and 28, the preamble states that a method is being claimed while the limitation headings refer to system elements. Applicant respectfully traverses.

However, to expedite the prosecution of the application, independent method claims 18, 20, 23, 25, and 28, and their respective dependent claims have been amended to read as method claims as per the Examiner's suggestion. Thus, claims 18-30 should not be allowable.

In the outstanding Office Action, claims 1-17 and 28-30 were rejected under 35 U.S.C. § 101 as being directed towards non-statutory subject matter. Specifically, it is asserted that independent claims 1, 8, 10 and 16 do not produce a "useful, concrete, and tangible" output. Additionally it is asserted that claim 28, in its broadest reasonable interpretation, encompasses a human being. Applicant respectfully traverses.

Independent claims 1 and 10 disclose logic that, when in communication with a processor, converts pairing information to audible signals. The intended result of this logic is that the logic communicates with the processor to affect an audible signal from the speaker. Similarly, independent claims 8 and 16 disclose logic that, when in communication with a processor, converts signals from a microphone into control signals directed to the wireless device. The intended result of this logic is that the logic communicates with the processor to convert the incoming pairing information from the microphone into control signals to affect pairing of the wireless devices.

However, to expedite the prosecution of the application, independent claims 1 and 10 have been amended to clarify the intended result. Similarly, independent claims 8 and 16 have been amended to clarify that the intended result.

It is asserted that independent claim 28, in its broadest reasonable interpretation, encompasses a human being. Applicant respectfully traverses. Claim 28 is a method claim of which two elements involve "communicating audible signals to a subscriber" and "prompting a

subscriber...” These are essential steps in what still remains a method for secure communication between wireless devices.

In the outstanding Office Action, claims 102, 5, 8, 18-19, 28, and 30 were rejected under 35 U.S.C. 102(b) as being anticipated by Thomas et al. (U.S. Patent Application No. 2002/0065663). It is asserted that Thomas discloses the devices and methods for pairing wireless devices claimed by applicant in the present invention. Applicant respectfully traverses.

It is alleged that Thomas teaches all elements of independent claim 1. Specifically, it is alleged that Thomas recites pairing information for a first wireless device, pairing information for a second wireless device, a processor, a speaker, and logic which, when applied to the processor, converts the pairing information into audible signals to be communicated via the speaker. Applicant respectfully traverses.

Thomas does not teach all the elements of independent claim 1. For instance, Thomas does not teach pairing information for a wireless device where the pairing information comprises encryption keys unique to the wireless device, as described in the specification for the present invention (spec ¶¶6, 28, 58, 61). At best, the “pairing information” that Thomas refers to is merely the Internet Protocol (IP) or equivalent address of the device, which is already identified by the first wireless device before the pairing information is retrieved (spec ¶¶31). Consequently, the logic in independent claim 1 in communication with the processor generates audible signals that correspond to the pairing information for the second wireless device. In contrast, Thomas only discloses logic that converts the IP or equivalent address of the wireless device. Merely the IP address of the device cannot constitute “pairing information” as the claimed invention aims to provide a secure means for pairing of wireless devices. In fact, applicant clearly states that the pairing process is meant to be secure and immune to vulnerabilities by providing for DTMF

tones, pairing codes, authentication algorithms and encryption codes (spec ¶1, 6, 30, 32, 35, 48, 58, 61). Thomas, on the other hand, makes no reference whatsoever to any security features of their “pairing process.” In fact, Thomas explicitly limits their logic to providing audible signals relating to the network address of a device. Notably, where in applicants claimed invention the pairing results in a direct private secure communication, Thomas provides only for communication over the public internet (Thomas, Fig. 1, ¶19-22). Since Thomas does not disclose a pairing process involving authentication or encryption information, Thomas does not teach a system or method for secure pairing of wireless devices. It is also alleged that the “pairing code” in dependent claim 5 that is specific to a wireless device is anticipated by the unique IP address disclosed in Thomson. For the reasons listed above, this IP or equivalent network address cannot count as pairing information as is claimed in applicant’s invention. Thus, independent claim 1 and its subsequent dependent claims should be allowed.

Similarly, with respect to independent claims 8 and 18, and respective dependent claims, it is alleged that Thomas anticipates the logic and step of converting signals from a microphone into control signals to effect pairing with a wireless device. Applicant respectfully traverses.

Thomas does not anticipate independent claims 8 and 18. For instance, Thomas does not teach logic which, in communication with the processor, converts signals produced by the microphone into control signals to effect pairing of wireless devices. Applicant’s invention discloses in claim 8 the generation of control signals to effect pairing of wireless devices where said pairing is a secure communication using short-range wireless techniques that use pairing codes, authentication algorithms or encryption keys (spec ¶6, 58, 61). Thomas merely discloses a “recognizer” and “communications block” to send a message from one device to a second device upon receipt of the network or IP address of the second device (Thomas, ¶22). No

mention is made of control signals to effect pairing of wireless devices, thus Thomas does not anticipate claim 8.

Neither does Thomas disclose a method for secure communication between wireless devices where wireless devices are paired using audible signals. Thomas does not disclose the step of converting audible signals relating to pairing information into control signals to affect pairing of wireless devices. At best, Thomas discloses a method for communicating an address of a device to a second device, and control signals to initiate communication upon receipt of the address of the device. Since Thomas does not disclose a method for secure communication between wireless devices, Thomas cannot anticipate claim 18.

Thus independent claims 8 and 18 and their respective dependent claims should be allowed.

With respect to claim 28, it is asserted that Thomas recites a first wireless device converting pairing information for a second wireless device into audible signals, the first wireless device communicating the audible signals to a human, the human providing puts corresponding to the audible signals to the second wireless device, the second wireless device converting the inputs into control signals, and the second wireless device applying the control signals to effect pairing with the first wireless device. Applicant respectfully traverses.

Thomas does not disclose a method for secure communication between wireless devices. The pairing information in Applicant's invention is not merely a network addresses as is disclosed in Thomas. Applicant's invention teaches a method wherein a subscriber is prompted to input a series of codes into a second wireless device such that the devices are paired in a secure wireless session. On the other hand, Thomas discloses a method where a user of a device repeats the network address of the device to a second device thereby facilitating communication

over a public network. Since Thomas does not disclose a method for secure communication between wireless devices, Thomas cannot anticipate claim 28.

Additionally, Thomas does not disclose a pairing code specific to the wireless device as the Examiner stated. The pairing code in applicant's invention is not a network or IP address that is freely available to other devices on or off the network. Additionally, claim 30 is dependent on independent claim 28. Since the examiner has failed to disclose or suggest how Thomas encompasses all limitations of claim 28, Thomas cannot anticipate the claims

Thus, claim 30 should be allowed.

In the outstanding Office Actions, claims 3, 6, 9-12, 14-17, and 20-27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Thomas in view of Haller et al. (U.S. Patent No. 6,845,097). Additionally, claims 4 and 29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Thomas in view of Cannon et al. (U.S. Patent No. 7,155,163), and claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Thomas in view of Haller and further in view of Cannon. Applicant respectfully traverses.

With respect to claims 3 and 9, it is asserted that Thomas teaches all of the limitations of the present invention as recited in the claims but for a process that synchronizes acts defined by the pairing operation with the audible signals, and . Further, it is alleged that Haller does disclose this process and that it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references. Applicant respectfully traverses.

Neither Thomas, Haller, nor any other related art of record, alone or in combination, disclose or fairly suggest the present invention as recited in the pending claims. For example, neither Thomas nor Haller teach or fairly disclose logic which, in communication with a processor, synchronizes the applications of the control signals with pairing of wireless devices as

disclosed in applicant's invention. Thomas does not specifically suggest that the output of an audio signal is synchronized with pairing information. As stated previously, Thomas does not even disclose a secure means for communication between wireless devices. Thomas makes no reference whatsoever to any security features of their "pairing process." Where in applicants claimed invention the pairing results in a direct private secure communication, Thomas provides only for communication over the public internet (Thomas, Fig. 1, ¶19-22). Since Thomas does not disclose a pairing process involving authentication or encryption information, Thomas does not teach a system or method for secure pairing of wireless devices.

Additionally, Haller does not disclose logic which, in communication with a processor, synchronizes acts such as the application of control signals with the pairing information for a wireless device. Applicant's invention discloses a synchronization process where a first device may perform acts to begin the pairing process and signal a second device to perform acts that begin the pairing process for the second device. The second device in turn signals the first device to perform additional acts to pair the devices, and so on (spec, ¶37). At best, Haller discloses a process that periodically attempts to initiate pairing of devices (Haller, col. 7 lines 1-2) or withholds attempts to pair with a device that is unavailable (col. 7 lines 11-15).

Since Thomas does not teach a system or method for secure pairing of wireless devices and Haller does not teach a system or method to synchronize the pairing process, the combination offers no suggestion or motivation to combine the references to encompass the elements of claims 3 and 9. Additionally, because claims 12, 20 (the first claim 20), 22, and 24 contain subject matter similar to claims 3 and 9, these claims are not obvious for the above reasons.

With respect to claim 6, it is asserted that although Thomas does not teach that the audio information corresponds to DTMF tones, Haller recites device pairing codes in the form of DTMF tones. Applicant respectfully traverses.

Since Thomas does not teach a system or method for secure pairing of wireless devices, the combination offers no suggestion of motivation to combine the references to encompass the elements of claim 6. Because the references are from a different field of endeavor, it would not have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Thomas with the use of DTMF tones taught by Haller. Additionally, because claim 15 contains subject matter similar to claim 6, claim 15 is not obvious for the above reasons.

With respect to claim 10, it is asserted that Thomas recites a processor, a speaker, and logic which, when applied to the processor converts the pairing information for the other wireless device to audible signals, and communicates the audible signals via the speaker. It is asserted that although Thomas does not specifically suggest that device information is sent to a network to affect device pairing, Haller recites a network server that receives a PIN identifying another wireless device and sends a pairing message to a first wireless device. Applicant respectfully traverses.

Neither Thomas nor Haller nor any other related art of record, alone or in combination, disclose or fairly suggest the present invention as recited in the claims. For the reasons given above, Thomas does not teach all the limitations of claim 10 as asserted by the examiner. Thomas does not teach logic that converts pairing information for a wireless device into audible signals, where said pairing information comprises encrypted keys. At most, Thomas teaches logic that converts an IP or network address of a device into audible signals. These network addresses are not “pairing information.” Similarly, Haller does not disclose logic that converts

pairing information for a wireless device into audible signals. Since Thomas does not teach a system or method for secure pairing of wireless devices, the combination offers no suggestion of motivation to combine the references to encompass all the limitations of claim 10. Since claim 11 is dependent on claim 10, claim 11 is not obvious for the above reasons.

With respect to claim 14, it is asserted that Thomas discloses a pairing code specific to the wireless device. Applicant respectfully traverses. The pairing code in applicant's invention is a unique authenticator for security purposes. The device-specific address disclosed in Thomas is merely an identifier for the location of a device. This network address can be accessed by any nearby device wirelessly, or any other device on a network capable of communication with the device having the network address. There is no security measure involved in having a device-specific address for a device. The pairing code in applicant's invention is not generally visible, and can be generic or specified by a user and is usually part of the pairing information (spec ¶¶7, 35-36). Neither Thomas, Haller, nor any other related art of record, alone or in combination, disclose or fairly suggest the present invention as recited in the claims. Claim 14 depends on claim 10. For the reasons given above, Thomas does not teach all the limitations of claim 10 as asserted by the examiner. Further, the Examiner has failed to indicate how Haller discloses or suggests any of the missing limitations in claim 10. For this reason, the combination of Thomas and Haller does not teach all the limitations of dependent claim 14.

With respect to independent claim 16, it is asserted that Thomas recites a microphone, a processor, and logic which, when applied to the processor, converts signals produced by the microphone into control signals, and applies the control signals to effect pairing of the wireless device with another device. It is asserted that although Thomas does not specifically suggest that speech signals are applied to a network to affect device pairing, Haller recites a network server

that receives a pairing request in the form of speech, recognizes the pairing request, and sends a pairing message to a wireless device. Applicant respectfully traverses.

Neither Thomas nor Haller nor any other related art of record, alone or in combination, disclose or fairly suggest the present invention as recited in the claims. For the reasons given above, Thomas does not teach all the limitations of claim 16 as asserted by the examiner. Thomas does not teach logic that converts pairing information into speech signals and communicating the speech signals to a network. At most, Thomas teaches logic that converts an IP or network address of a device into audible signals, or logic that converts an audible numeric IP or network address into a control signal. These network addresses are not “pairing information.” Similarly, Haller does not disclose logic that converts pairing information for a wireless device into audible signals. Since Thomas does not teach a system or method for secure pairing of wireless devices, the combination offers no suggestion of motivation to combine the references to encompass all the limitations of claim 16. Additionally, claims 20 (second claim 20), 23, and 25 contain subject matter similar to claims 10 and 16, and are thus not obvious for the above reasons. Additionally, since claim 21 is dependent on independent claim 20, it is not obvious. Similarly, since claim 26 is dependent on independent claim 25, and claim 27 is dependent on claim 26, these claims are also not obvious. For the reasons given above, Thomas does not teach the limitations of claims 20 and 25 as asserted by the examiner.

In the outstanding Office Action, claims 4 and 29 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Thomas in view of Cannon et al. (U.S. Patent No. 7,155,163). It is asserted that Thomas teaches the wireless device that establishes a connection with another wireless device through synthesized audio, as applied to claims 1 and 28. It is asserted that although Thomas does not specifically disclose device pairing codes common to a wireless device

model, Cannon discloses a pairing code common to a particular model of wireless device.

Applicant respectfully traverses.

Neither Thomas, Cannon, nor any other related art of record, alone or in combination, disclose or fairly suggest the present invention as recited in the claims. With regard to claims 4 and 29, Cannon does not disclose a pairing code common to a particular model of wireless device. At best, Cannon teaches that the same pairing code may be applied to multiple devices. (Cannon, Col. 5 lines 12-20). However, Cannon makes no reference to a pairing code common to a particular model of wireless device. Additionally, Claim 4 depends on independent claim 1. For the reasons given above, Thomas does not teach all the limitations of claim 1 as asserted by the examiner. Further, the examiner has failed to indicate how Cannon discloses or suggests any of the missing limitations in claim 1. Similarly, Claim 29 depends on independent claim 28. For reasons given above, Thomas does not teach all the limitations of claim 28 as asserted by the examiner. Further, the examiner has failed to indicate how Cannon discloses or suggests any of the missing limitations in claim 28. For this reason, the combination of Thomas and Cannon does not teach all the limitations of dependent claims 4 and 29.

In the outstanding Office Action, claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Thomas in view of Haller et al. and further in view of Cannon et al. It is asserted that Thomas in view of Haller teaches the wireless device that establishes a connection with another wireless device through synthesized audio, as applied to claim 10. It is asserted that although Thomas does not specifically disclose device pairing codes common to a wireless device model, Cannon discloses a pairing code common to a particular model of wireless device. Applicant respectfully traverses.

Neither Thomas, Haller, Cannon, nor any other related art of record, alone or in combination, disclose or fairly suggest the present invention as recited in the claims. With regard to claim 13, Cannon does not disclose a pairing code common to a particular model of wireless device. At best, Cannon teaches that the same pairing code may be applied to multiple devices. (Cannon, Col. 5 lines 12-20). However, Cannon makes no reference to a pairing code common to a particular model of wireless device. Additionally, Claim 13 depends on independent claim 10. For the reasons given above, Thomas does not teach all the limitations of claim 10 as asserted by the examiner. Neither is the claim rendered obvious by Thomas in view of Haller. Further, the examiner has failed to indicate how Cannon discloses or suggests any of the missing limitations in claim 10.

A TWO (2) month extension of time is hereby requested to enter this amendment. If any other fees are associated with the entering and consideration of this amendment, please charge such fees to our Deposit Account 50-2882.

Applicant respectfully requests an interview with the Examiner to present more evidence of the unique attributes of the present invention in person. As all of the outstanding rejections have been traversed and all of the claims are believed to be in condition for allowance, Applicant respectfully requests issuance of a Notice of Allowance. If the undersigned attorney can assist in any matters regarding examination of this application, Examiner is encouraged to call at the number listed below.

Respectfully submitted,

Date: 21 August 2007

/Fariborz Moazzam/

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